

**102.** The controlling unit **122** sends the controlling signals to regulate the power outputted from the power converting module **100**. For instance, the controlling unit **122** may narrow the duty cycle of the controlling signal to lower the power outputted from the power converting module **100** while the power is higher than a preset power (such as first power, the second power, or the third power required by the electronic device **3**). On the contrary, the controlling unit **122** may broaden the duty cycle of the controlling signal to heighten the power outputted from the power converting module **100** while the power is higher than the preset power.

**[0028]** The feedback unit **124** is electrically connected to the output stage filter **108**, the handshake module **140**, and the controlling unit **122**, and is configured to generate a feedback signal and send the feedback signal to the controlling unit **122**. The controlling unit **122** generates the controlling signals with particular duty cycle according to the information involved in the feedback signal. More particularly, the feedback unit **124** is further configured to detect the power outputted from the output stage filter **108** and receive identifying signals generated by the handshake module **140**, thus the feedback signal includes not only the information reflecting the power outputted from the output stage filter **108** but also the information involved in the identifying signal generated by the handshake module **140**.

**[0029]** The protecting unit **126** is electrically connected to the handshake module **140** and the controlling unit **122** and includes an over-voltage protecting circuit and an over-current protecting circuit for providing functions of over-voltage protection and over-current protection.

**[0030]** The electronic device **3** determines whether one of the second ID codes listed in the look-up table is matching with the first ID code or not when the electronic device **3** is connected to the power supply device **10**. A first identifying signal is generated by the electronic device **3** and transmitted to the handshake module **140** to inform the power supply device **10** about the second ID code matching with the first ID code is listed in the look-up table. The first identifying signal is then transmitted to the feedback unit **124**, and the feedback unit **124** sends the feedback signal including the information that the second ID code matching with the first ID code is listed in the look-up table to the controlling unit **122**. Thereafter, the controlling unit **122** drives the power converting module **100** to output the first power to the electronic device **3** to meet the requirement of the charging operation.

**[0031]** On the contrary, a second identifying signal is generated by the electronic device **3** and transmitted to the handshake module **140** to inform the power supply device **10** about all of the second ID codes listed in the look-up table do not match with the first ID code. The second identifying signal is then transmitted to the feedback unit **124**, and the feedback unit **124** sends the feedback signal including the information that all of the second ID codes listed in the look-up table do not match with the first ID code to the controlling unit **122**. Thereafter, the controlling unit **122** drives the power converting module **100** to output the second power to the electronic device **3** to meet the requirement of the charging operation or output the third power to the electronic device **3** to meet the requirement of the normal operation.

**[0032]** Specifically, when one of the second ID code listed in the look-up table is matching with the first ID code, the first power outputted from the power supply device **10** must

include the rated voltage and/or the rated current of the electronic device **3** during charging operation.

**[0033]** The power supply device further includes a bi-directional connecting port **160** electrically connected to the output stage filter **108** and the handshake module **140** for transmitting data between the power supply device **10** and the electronic device **3** and conducting power from the power supply device **10** to the electronic device **3**. The bi-directional connecting port **160** is, for example, an USB. More particularly, when the electronic device **3** is connected to the power supply device **10**, the electronic device **3** reads the look-up table stored in the memory unit **142** via the bi-directional connecting port **160**, and the first power, the second power, and the third power generated by the power supply device **10** is conducted to the electronic device **3** by the bi-directional connecting port **160**.

**[0034]** Reference is made to FIG. 3, which is a circuit block diagram of an identification code updating module according to the first embodiment of the present invention. For sake of convenient explanation, FIG. 3 also illustrates the power supply device **10** and the electronic device **3**. The identification code updating module **5** includes a microprocessor **50**, an input port **52**, and an output port **54**, the microprocessor **50** is connected between the input port **52** and the output port **54**, the input port **52** is configured to make a connection between the microprocessor **50** and the electronic device **3**, and the output port **54** is connected to the bi-directional connecting port **160** of the power supply device **10**.

**[0035]** The identification code updating module **5** obtains the first ID code of the electronic device **3** and updates a second ID code (thereafter “the new second ID code”) matching with the first ID code to the look-up table when the second ID codes listed in the look-up table do not matching the first ID code.

**[0036]** Specifically, when performing an ID code updating procedure, the electronic device **3** generates information corresponding to the first ID code to the microprocessor **50** via the input port **52**. The information corresponding to the first ID code is encoded by the microprocessor **50** to generate the new second ID code, and the new second ID code is then transmitted to the memory unit **142** shown in the FIG. 2 and listed in the look-up table via the bi-directional connecting port **160**. Thereby the look-up list includes the new second ID code matching with the first ID code, and when the electronic device **3** having the first ID code is connected to the power supply device **10**, the first power meet the charging operation of the electronic device **3** can be conducted to the electronic device **3**.

**[0037]** It should be noted that the identification code updating module **5** is not limited to be the hardware structure shown in the FIG. 3. Selectively, the identification code updating module **5** may be software build-in the electronic device **3** or the power supply device **10**.

**[0038]** Besides, the identification code updating module **5** is not limit to obtain the information corresponding to the first ID code from the electronic device **3**. Selectively, the information corresponding to the first ID code may be obtained from cloud database. More particularly, the information corresponding to the first ID code is downloaded and transmitted to the microprocessor **50** by an electronic appliance (such as a personal computer) does not have the first ID code, and the information corresponding to the first ID code is encoded by the microprocessor **50** to generate the new